UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/524,643	02/10/2005	Hideki Garren	022259-001010US	1611		
	7590 06/04/200 AND TOWNSEND AN	EXAMINER				
TWO EMBARCADERO CENTER			MINNIFIELD, NITA M			
EIGHTH FLOO SAN FRANCIS	SCO, CA 94111-3834		ART UNIT	PAPER NUMBER		
			1645			
			MAIL DATE	DELIVERY MODE		
			06/04/2008	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

```
Sequence Listing could not be accepted due to errors.
See attached Validation Report.
If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).
Reviewer: Anne Corrigan
Timestamp: [year=2008; month=3; day=10; hr=17; min=27; sec=1; ms=990; ]
_____
*************
Reviewer Comments:
<210> 2
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223>
     immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (11)..(11)
<223> n is any naturally occurring or synthetic nucleotide except c
<220>
<221> misc_feature
<222> (12)..(12)
<223> n is any naturally occurring or synthetic nucleotide except g
<400> 2
                                                          22
tgactgtgry nnyyagagat ga
Please change the <210> and <400> responses to "298," since this is the
last sequence in the submitted file. It appears after Sequence 297.
```

Validated By CRFValidator v 1.0.3

Application No: 10524643 Version No: 3.0

Input Set:

Output Set:

Started: 2008-02-25 18:22:13.496

Finished: 2008-02-25 18:22:15.927

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 431 ms

Total Warnings: 298

Total Errors: 1

No. of SeqIDs Defined: 298

Actual SeqID Count: 298

Err	or code	Error Description	on								
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(1)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(2)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(3)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(4)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(5)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(6)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(7)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(8)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(9)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(10)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(11)
W	213	Artificial (or	Unknown	found	in	<213>	in	SEQ	ID	(12)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(13)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(14)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(15)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(16)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(17)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(18)
W	213	Artificial o	or	Unknown	found	in	<213>	in	SEQ	ID	(19)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)

Input Set:

Output Set:

Started: 2008-02-25 18:22:13.496

Finished: 2008-02-25 18:22:15.927

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 431 ms

Total Warnings: 298

Total Errors: 1

No. of SeqIDs Defined: 298

Actual SeqID Count: 298

Error code Error Description

This error has occured more than 20 times, will not be displayed

E 212 Invalid Sequence ID Number; Expected 298 as next SeqID but skipped

SEQUENCE LISTING

```
<110> Garren, Hideki
      Ho, Peggy P.
      Steinman, Lawrence
      Bayhill Therapeutics, Inc.
      The Board of Trustees of the Leland Stanford Junior
         University
<120> Methods and Immune Modulatory Nucleic Acid Compositions for
      Preventing and Treating Disease
<130> 022259-001010US
<140> 10524643
<141> 2005-02-10
<150> US 60/428,643
<151> 2002-11-21
<150> WO PCT/US03/37157
<151> 2003-11-21
<160> 298
<170> PatentIn version 3.3
<210> 1
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 1
gtggtt
                                                                     6
<210> 2
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 2
atggtt
                                                                     6
<210> 3
<211> 6
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> immunomodulatory oligonucleotide
<400> 3
                                                                     6
gcggtt
<210> 4
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 4
                                                                     6
acggtt
<210> 5
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 5
                                                                     6
gtggct
<210> 6
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 6
atggct
                                                                     6
<210> 7
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 7
gcggct
                                                                     6
<210> 8
```

<211> 6

```
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 8
                                                                     6
acggct
<210> 9
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 9
gtggtc
                                                                     6
<210> 10
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 10
atggtc
                                                                     6
<210> 11
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 11
gcggtc
                                                                     6
<210> 12
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 12
acggtc
                                                                     6
```

```
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 13
gtgctt
                                                                     6
<210> 14
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 14
                                                                     6
atgctt
<210> 15
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 15
gcgctt
                                                                     6
<210> 16
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 16
                                                                     6
acgctt
<210> 17
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
```

<210> 13

```
6
gtgcct
<210> 18
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 18
atgcct
                                                                     6
<210> 19
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 19
gagaat
                                                                     6
<210> 20
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 20
acgcct
                                                                     6
<210> 21
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 21
                                                                     6
gtgctc
<210> 22
<211> 6
<212> DNA
```

<400> 17

<213> Artificial Sequence

```
<220>
<223> immunomodulatory oligonucleotide
<400> 22
                                                                     6
atgctc
<210> 23
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 23
                                                                     6
gagatia
<210> 24
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 24
acgete
                                                                     6
<210> 25
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 25
ggggtt
                                                                     6
<210> 26
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 26
agggtt
                                                                     6
<210> 27
```

<211> 6

```
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 27
                                                                     6
gaggtt
<210> 28
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 28
aaggtt
                                                                     6
<210> 29
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 29
ggggct
                                                                     6
<210> 30
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 30
                                                                     6
agggct
<210> 31
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 31
gaggct
                                                                     6
```

```
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 32
                                                                     6
aaggct
<210> 33
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 33
                                                                     6
ggggtc
<210> 34
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 34
agggtc
                                                                     6
<210> 35
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 35
                                                                     6
gaggtc
<210> 36
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
```

<210> 32

```
aaggtc
                                                                     6
<210> 37
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 37
gggctt
                                                                     6
<210> 38
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 38
aggett
                                                                     6
<210> 39
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 39
gagctt
                                                                     6
<210> 40
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 40
                                                                     6
aagctt
<210> 41
<211> 6
<212> DNA
```

<213> Artificial Sequence

<400> 36

```
<220>
<223> immunomodulatory oligonucleotide
<400> 41
                                                                     6
gggcct
<210> 42
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 42
                                                                     6
aggcct
<210> 43
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 43
                                                                     6
gageet
<210> 44
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 44
aagcct
                                                                     6
<210> 45
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 45
gggctc
                                                                     6
<210> 46
```

<211> 6

```
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 46
                                                                     6
aggete
<210> 47
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 47
gagete
                                                                     6
<210> 48
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 48
aagctc
                                                                     6
<210> 49
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> stimulatory CpG-ODN oligonucleotide
<400> 49
                                                                     6
aacgtt
<210> 50
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (1)..(6)
```

```
<400> 50
aaggtt
<210> 51
<211> 14
<212> PRT
<213> Artificial Sequence
<220>
<223> dihydrolipoamide acetyl-transferase (E2) component of
      pyruvate dehydrogenase complex (PDC) PDC-E2 peptide
      self-antigen
<400> 51
Gly Asp Leu Leu Ala Glu Ile Glu Thr Asp Lys Ala Thr Ile
<210> 52
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 52
tgactgtgaa ggttagagat ga
                                                                    22
<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (13)..(14)
<223> nn is GpG or non-GpG dinucleotide
<400> 53
                                                                    24
tgactgtgtg rrnnyyagag atga
<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence
```

<223> phosphorothioate backbone

```
<223> immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (13)..(14)
<223> nn is GpG or non-GpG dinucleotide
<400> 54
                                                                    24
tgactgtgtg rynnyyagag atga
<210> 55
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (1)..(10)
<223> n is any nucleotide
<220>
<221> misc_feature
<222> (13)..(14)
<223> nn is GpG or non-GpG dinucleotide
<220>
<221> misc_feature
<222> (17)..(26)
<223> n is any nucleotide
<400> 55
                                                                    26
nnnnnnnnn rynnyynnnn nnnnnn
<210> 56
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<220>
<221> misc_feature
<222> (1)..(10)
<223> n is any nucleotide
<220>
<221> misc_feature
```

<220>

```
<222> (13)..(14)
<223> nn is GpG or non-GpG dinucleotide
<220>
<221> misc_feature
<222> (17)..(26)
<223> n is any nucleotide
<400> 56
nnnnnnnnn rrnnyynnnn nnnnnn
                                                                    26
<210> 57
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 57
                                                                    26
ggggggggg aaggttgggg gggggg
<210> 58
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 58
                                                                    26
ggggggggg atggttgggg gggggg
<210> 59
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 59
                                                                    26
ggggggggg acggttgggg gggggg
<210> 60
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 60
```

<21.0>	61	
<210> <211>	61 26	
<211>		
	Artificial Sequence	
	1	
<220>		
<223>	immunomodulatory oligonucleotide	
<400>	61	
gggggg	gggg atgcttgggg gggggg	26
<210>		
<211>		
<212>		
	Artificial Sequence	
	-	
<220>		
<223>	immunomodulatory oligonucleotide	
<400>	62	
gggggg	gggg acgcttgggg gggggg	26
<210>	63	
<211>		
<212>		
	Artificial Sequence	
<220>		
<223>	immunomodulatory oligonucleotide	
	63	
CCCCCC	ecce aaggtteeec eeeece	26
<210>	64	
<211>	26	
<212>		
	Artificial Sequence	
<220>		
<223>	immunomodulatory oligonucleotide	
<400>	64	0.5
cccccc	ecce atggtteece eeeece	26
<210>	65	
<211>	26	
<212>		

ggggggggg aagcttgggg gggggg

26

<213> Artificial Sequence

```
<223> immunomodulatory oligonucleotide
<400> 65
cccccccc acggttcccc ccccc
                                                                   26
<210> 66
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 66
cccccccc aagettcccc ccccc
                                                                   26
<210> 67
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 67
                                                                   26
cccccccc atgcttcccc ccccc
<210> 68
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 68
                                                                   26
cccccccc acgetteccc cccccc
<210> 69
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 69
tgactgtgaa gcttagagat ga
                                                                   22
<210> 70
<211> 22
```

<212> DNA

<213>	Artificial Sequence				
<220>					
<223>	immunomodulatory oligonucleotide				
<400>	70				
	tgaa geteagagat ga	22			
egaceg	tgaa geteagagat ga	22			
<210>	71				
<211>	22				
<212>	DNA				
<213>	Artificial Sequence				
<220>					
<223>	immunomodulatory oligonucleotide				
<400>	71				
	/I tgaa gcctagagat ga	22			
tyatty	tyaa yeelayayat ya	22			
<210>	72				
<211>	22				
<212>	DNA				
<213>	Artificial Sequence				
<220>					
<223>	immunomodulatory oligonucleotide				
<400>	72				
	72 tgaa gcccagagat ga	22			
cgaccgcgaa gcccagagac ga 42					
<210>	73				
<211>	22				
<212>	DNA				
<213>	Artificial Sequence				
<220>					
<223>	immunomodulatory oligonucleotide				
<400>	73				
	tgag gettagagat ga	22			
- 5 5	- 55 - 5 5 5				
<210>	74				
<211>	22				
<212>	DNA				
<213>	Artificial Sequence				
<220>					
<223>	immunomodulatory oligonucleotide				
<400>	74				
	tgag geteagagat ga	22			

```
<210> 75
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 75
tgactgtgag gcctagagat ga
                                                                    22
<210> 76
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 76
                                                                    22
tgactgtgag gcccagagat ga
<210> 77
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 77
tgactgtgga gcttagagat ga
                                                                    22
<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
<400> 78
tgactgtgga gctcagagat ga
                                                                    22
<210> 79
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> immunomodulatory oligonucleotide
```

<400> 79

<210>	80		
<211>			
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	immunomodulatory oligonucleotide		
<400>	80		
tgactg	tgga gcccagagat ga	22	
<210>	81		
<211>			
<212>			
<213>	Artificial Sequence		
<220>			
<223>	immunomodulatory oligonucleotide		
<400>	81		
tgactgtggg gcttagagat ga 22			
<210>	82		
<211>	22		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	immunomodulatory oligonucleotide		
<400>	82		

tgactgtgga gcctagagat ga

22